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AUTHOR Koo, Ramsey D.
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ABSTRACT

This study examined the relationship among educational aspiration, cross-cultural sensitivity, and field of study of 196 Chinese student teachers enrolled in the Faculty of Education for Fall 1994 and Spring 1995 at the University of Macau (China). The study investigated other patterns of cross-cultural experience and activities, including average weekly time spent viewing English television programs and reading English newspapers, making friends with foreigners, studying foreign languages, visiting English speaking countries, and planning to study abroad. The Student Information form collected demographic profiles and academic information including biographical data, educational aspiration, English newspaper reading and television viewing habits, attitudes toward British and American people, choice of movies, overseas study, and English learning experience in high school. The Intercultural Insight Questionnaire included 24 pairs of contrasting American and British trait descriptions in forced-choice format, providing cross-cultural insight scores. Data analysis indicated that many respondents had insufficient preparation in English before enrolling in teacher education. They had very strong expectancies for future academic success. Field of study had no bearing on educational aspiration and cross-cultural sensitivity. There were no gender differences on educational aspirations or cross-cultural sensitivity. Older students achieved somewhat lower scores on their high school matriculation examination in English and had less aspirations toward higher degrees. None of the variables such as English examination score, degree aspiration, and chronological age were valid in forecasting the criterion variable of cross-cultural sensitivity. (Contains 18 references and 10 tables.) (Author/SM)

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An Analysis of the Relationship Between Educational Aspiration, Cross-Cultural Sensitivity, and Field of Study of Chinese Student-Teachers at the University of Macau

Ramsey D. Koo, Senior Lecturer, Department of Educational Studies,
Hong Kong Institute of Education, Taipo, New Territories, Hong Kong

(Paper presented at the 1998 Annual ACEI International Study Conference on "Nurturing, Caring, Communities for Children & Families" in Tampa, Florida, USA, April 15-18, 1998)

ABSTRACT

This study aims to ascertain the relationship between educational aspiration, cross-cultural sensitivity and field of study of 196 Chinese student-teachers enrolled in the Faculty of Education for Fall 1994 and Spring 1995 at the University of Macau, the largest government funded university in the Portuguese colony of Macau. In addition to the relationship between the above variables, other patterns of cross-cultural experience and activities of the student-teachers such as average weekly time spent on viewing English television programs and reading English newspapers, making friends with foreigner, studying a foreign language, visiting the UK and USA, planning to study aboard, etc., were also sought. Findings of this study showed that student teachers in Macau had very strong expectancies for future academic success. The overwhelming majority (94%) of students were not satisfied with a sub-degree teaching certificate qualification, nearly half intended continuing to BEd level. As for post-graduate education, one-fourth wished to obtain a master's degree (MEd/MA) and about one-fifth a doctorate (PhD/EdD). Field of study was found to have no bearing on educational aspiration and cross-cultural sensitivity as measured by the Inter-Cultural Insight Questionnaire (ICIQ) score. Also, sex difference on educational aspirations and cross-cultural sensitivity did not exist. Compared with that of their younger counterparts, older students tended to achieve a somewhat lower score on their high school matriculation examination in English and had less aspirations towards higher degree, although both correlations were not significant at the 0.05 level. In regard to stepwise regression analysis, none of the predictor variables such as English examination score (CERTENG), degree aspiration (DEGEXP), and chronological age (AGE) were valid in forecasting the criterion variable of cross-cultural sensitivity (ICIQ). Finally, the study discusses some implications and recommendations for program improvement and development in teacher education.

Email: rkoo@es.ied.edu.hk
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Introduction

The purposes of this investigation were (a) to investigate the relationships between field of study, educational aspiration, and cross-cultural sensitivity, (b) to explore the influence of field of study on educational aspirations and cultural sensitivity, (c) to examine the extent to which gender difference in Chinese students is significant in their expectations of completing higher degrees and extending their learning across other cultures, and (d) to determine the predictive validity of a set of four independent variables including English examination grade, educational aspiration, and age on the criterion outcome as measured by the score on the Inter-Cultural Insight Questionnaire (ICIQ).

Cross-Cultural Sensitivity

Communication that occurs in everyday intracultural encounters has tremendous influence on the academic attainment of a vast number of students. Rapidly increasing global interdependence has made it clear that "peoples" are not as neatly culturally bound and homogeneous as they used to be (Rosaldo,1989). Nonetheless, one of the most widespread problems facing college educators in social science and humanities and language instructors in Macau today is that students who enter post-secondary institutions are not fully capable of extending and enhancing their learning experience across other cultures and traditions. Some studies have shown that academic success in school is related to a student's cross-cultural communication skills and to the degree of familiarity and sensitivity towards the norms and values of other cultures in a multicultural society. For example, research conducted by Baldauf & Ayable (1977) links school achievement

to overt (external) and covert (internal) measures of acculturation for 190 senior high school students in their final year of secondary education in American Samoa. Results of this study lent support to the findings of other research (e.g., Adams, Higley, & Campbell, 1977; Dawkins & Dawkins, 1980) indicating that cross-cultural sensitivity and adaptation to both the overt and covert elements of the host culture are important factors in the success of students of diverse cultural and ethnic backgrounds in American schools.

A study of the intercultural communication of Chinese students from Hong Kong and Taiwan by a group of educational researchers (Alexander, Klein, Workneh, & Miller, 1981) at the University of Wisconsin has shown that the number of close American friends reported by Chinese students was related to college satisfaction with (i) studying, (ii) course work, (iii) not being lonely, (iv) degree progress, and (v) overall academic achievement. In addition, Chinese students with sufficient English background and self-confidence were found to have a more positive orientation towards the cultural values of American society.

An investigation undertaken by Koo (1986) to determine the relationships among a selected group demographic, academic and non-academic variables on the academic success of Chinese college students from different socio-cultural backgrounds in California revealed some significant intercorrelations between overall academic performance and degree major, high school grades, English language skills, and length of residence in the United States. Although non-academic measures such as sex, age, country of origin, cross-cultural sensitivity score (ICIQ), participation in extracurricular

activities, financial aid and enrollment status did not show much relationship with the academic success criterion, as measured by the overall cumulative grade point average (CCGPA), the extent to which Chinese students were sensitive towards American culture was found to be positively related to high school academic achievement for both American-born Chinese (r = 0.3390) and Hong Kong students (r = 0.1830) at the 0.05 level. Sex difference on achievement was found to be important, with females doing better than males in their overall academic work. In addition, when subjects were divided and analyzed according to country of origin, students from Taiwan were found to encounter the most academic difficulty in college. On the whole, the academic achievement of students from mainland China were superior to that of students from Taiwan. However, no significant difference in academic achievement was observed between samples of Hong Kong, mainland China, and American-born Chinese students.

The lack of opportunities in everyday cross-cultural encounters have an important influence on Chinese students second language acquisition. In a very recent survey of Hong Kong tertiary students' attitude and proficiency in spoken English, Littlewood, Liu, & Yu, (1996) revealed that students who enter universities in Hong Kong had limited experience of using spoken English in active, questioning roles, and the frequency of such practice opportunities alone seems vital to their confidence and their proficiency. In addition, a great majority of students indicated that they like the sound of the English language and talking to foreign people in English in order to improve their communication skills. However, outside class in Form 6 and 7, speaking English was not among the three most frequent activities. The rank order of frequency of English

language activities outside class in Form 6 and 7 is: (i) listening to practice tapes and songs, (ii) reading newspapers, and (iii) watching television programs.

Educational Aspiration

Educational aspiration is so crucial in the school setting that many educators and researchers contended that higher academic expectations from self form an important basis for the success of students in school. Several important research studies have provided support for the relationship between educational aspiration and academic attainment. A project undertaken by Peng & Fetters (1978) to examine a set of twelve variables involved in withdrawal during the first two years of college from the National Longitudinal Study of the high school class of 1972 on 4,539 students from four-year institutions and 1,378 students from two-year institutions discovered that the combination of three variables including high school program, college grades, and educational aspiration were able to explain the most variance of students withdrawal behavior. On the whole, the total variance of withdrawal behavior accounted for by the selected set of twelve variables is about 4% for two-year college students and 6.25 % for the four-year college students. Also, the correlations between college grades and educational aspirations were found to be significant for both two-year ($r = 0.11$) and four-year ($r = 0.09$) colleges (Peng & Fetters, 1978).

A research conducted by Cheng & Wong (1991) to explore the relationships between mathematics achievement, parents' schooling, residence size, and expectation from parents and self of 894 Chinese students in Hong Kong demonstrated that little relationship exists between learning style of students and parents' education and size of

residence. In addition, the correlation between degree expectation and learning style was found to be significant mainly in the category concerning homework, and in some other areas such as how routinely a student uses his calculator and his expectation of diagrams in the textbook.

A more recent research carried out by Koo (1994) dealing with the degree expectations of 295 Chinese students in six large, private, secondary schools from senior forms in Macau confirmed the notion that Chinese students have high levels of educational aspiration for their post-secondary attainment. That is, upon completion of the high school diploma, the overwhelming majority of senior students would like to pursue higher academic qualifications in Macau and overseas. In order of preference, about half of the students intended to further their education by completing a bachelor's degree, 17 percent wanted to obtain a master's degree, 12 percent expected to pursue a doctorate, the remaining 19 percent were uncertain about their future academic undertaking. Sex difference in degree expectation was not significant, with females tending to be more indefinite than males in their pursuit of university education.

Field of Study

A review of the literature revealed that very little research has focused on the relationship of field of study to academic attainment in college (Koo,1986; Astin, 1971; Pavri, 1963; Liu, 1955; Hountras, 1954). For instance, an earlier survey of 587 graduate students conducted by Hontras (1954) at the University of Michigan from 1947 to 1949 indicated that students in the social sciences were more likely to encounter academic probation than students in other fields. Similarly, an investigation of the scholastic

achievement and related problems of 319 foreign graduate students at the University of Virginia reported that students who declared social sciences as their degree major had encountered more academic failure (Pavri, 1973).

In an attempt to determine the most effective predictors of academic achievement of Chinese students in three post-secondary institutions in California, Koo (1986) found that students who declared life science as their degree major achieved better grades than those in the fine arts and English as a Second Language (ESL) programs. Moreover, degree major did not have predictive validity on the academic success of the four selected sub-groups of Chinese students from Hong Kong, mainland China, Taiwan, and the United States.

Astin (1971) reported that students in humanities achieved better grades than those in education, business, and physical education. However, when the influence of high school performance, SAT scores, and college selectivity measure were controlled, no significant differences in academic achievement were observed among students in these fields of study.

On the basis of the findings of the above research studies, it appears that students in the field of social sciences tend to experience greater academic difficulties than those in other fields. Because the majority of these studies were not conducted recently, more current research evidence is thus needed to support and update our understanding of the influence of academic field of study on educational attainment of Chinese students.

In summary, past research on cross-cultural education has shown: (i) effective cross-cultural communication and sensitivity towards the values of other cultures have

tremendous influence on the academic attainment of Chinese students, and (ii) students enrolled in certain academic programs have a better chance of succeeding in college. Nonetheless, very limited effort has been made by educational researchers to link educational aspiration with cross-cultural experience, nor whether educational aspiration, English language competence, and age could effectively predict ones level of cross-cultural sensitivity. The present investigation aimed to determine the extent of the relationship between these selected variables -- i.e., cross-cultural sensitivity, educational aspiration, and field of study -- by employing a large group of Chinese students in the largest public teacher education institution in Macau.

Research Questions

The general purpose of this study was to examine the relationship between field of study, educational aspirations, and cross-cultural sensitivity. Moreover, the specific problems were explicated in terms of the following five research questions:

(1) What is the influence of field of study (FIELD) on educational aspirations (DEGEXP) and cross-cultural sensitivity as measured by the Intercultural Insight Questionnaire (ICIQ)?

(2) Are there significant differences in educational aspirations (DEGEXP) between male and female students?

(3) Are there significant differences in cross-cultural sensitivity (ICIQ) between male and female students as measured by the Intercultural Insight Questionnaire?

(4) What is the influence of cross-cultural sensitivity (ICIQ) on the relationship between field of study (FIELD) and educational aspiration (DEGEXP)?

(5) To what extent can cross-cultural sensitivity (ICIQ) as measured by the Intercultural Insight Questionnaire be predicted according to students English language examination grade (CERTENG), educational aspiration (DEGEXP) on the Macau School Certificate Examination (HKSCE), and chronological age (AGE)?

Because of the explicit link between academic achievement and educational aspiration (Peng & Fetters, 1978), and the fact that learners in certain academic fields are likely to encounter greater academic difficulties (Astin, 1971; Koo, 1986) and have less cross-cultural communication opportunities than those in other fields (Garcia, 1995), one may hypothesize that students majoring in some fields of study exhibit a significantly-greater level of cross-cultural sensitivity and hold stronger expectancies for future academic success.

Data and Method

The participants in this study consisted of a total of 196 Chinese students enrolled in eight undergraduate and one in-service Postgraduate Diploma in Education (i.e., PGDE-secondary) courses at the University of Macau during the semesters of Fall 1995 and Spring 1996. There were two instruments employed in the present study, entitled (i) the Student Information Form and (ii) the Intercultural Insight Questionnaire (ICIQ). The Student Information Form was designed to obtain the demographic profiles and academic information from the respondents including their biographical data, educational aspiration, English newspaper reading and TV viewing habits, attitudes towards British and American people, choice of movies, overseas study, and English learning experience in high school. In addition, the educational aspiration measure tapped the educational

level one planned to have prior to his or her completion of the certificate of basic teacher education at the University of Macau, including the PGCE-primary qualification.

Instrumentation

The Intercultural Insight Questionnaire (ICIQ) is composed of 24 pairs of contrasting American and British trait descriptions in forced-choice format. It was used to provide a cross-cultural insight score that has been referred to as a measure of cross-cultural understanding, sensitivity, or empathy, as well as the extent of interest and familiarity with the American society (Lindgren & Marrash, 1970). The questionnaire was initially developed by Henry Lindgren, in 1970, who was Professor of Psychology at the San Francisco State University. Participants in the present study were asked to indicate their reaction to each pair of trait descriptions in the twenty-four questions by checking the one that they thought was more typically an American trait. The total maximum score on the ICIQ is 24 points. In the past, Aamiry (1969) reported the test-retest reliability of the ICIQ was 0.65 for a sample of Jordanian university students. Lingren and Yu (1981) found a reliability coefficient of 0.74 for the ICIQ on American university students, and 0.49 for Lebanese university students whose second language was English. In addition, the study also revealed that Chinese immigrants who had resided three years or more in the United States tended to show significantly greater cross-cultural sensitivity toward the host society when compared to those who had been residents for a shorter period of time.

Findings

Table 1 shows some of the selected demographic and academic characteristics of the participants in this survey. The great majority of students were traditional 20-to-24-year-old females (84 %). Many of them were native-born citizens (64%) of Macau, while over one-third were originated from Mainland China (27%) & Hong Kong (7%). Although Macau does not has a public examination system like Hong Kong , (e.g. HKCEE, GCE A-Level), it can be seen that prior to admission to teacher education programs at the University of Macau, all participants had passed the English language subjects set by their own high schools upon matriculation with results of grade C or better. There were three major fields in the Faculty of Education from which undergraduate students could choose as their academic majors. (i) Early Childhood Education (ECE), (ii) Primary Education (multiple subjects) and (iii) Secondary Education (Single Subject including Chinese, English or Mathematics). In addition, participants in PGDE Course were all day-time secondary school teachers who did not receive any formal teacher training in their undergraduate education. Due to small sample size and to avoid the scattering of data into too many categories, academic majors in this study were combined into six fields of study for analysis. The number of respondents in each field of study is displayed in Part V of Table 1. We can see that the distribution of participants across all fields of studies are not even. By proportion, 2% were in Social Studies, 31% in Chinese, 16% in English, 6% in Mathematics and Science, and 12% in Miscellaneous Course.

Cross-Cultural Learning Experience

While traditional schooling in Macau places considerable emphasis on teacher-centered methodology, formal classroom instruction, and campus-based learning activities, it is not certain to what extent students in teacher education are extending and enhancing their learning that permits an exchange of ideas and experiences across other cultures and traditions. Table 2 presents the summary descriptive measures of the students' responses according to the items on the Student Questionnaire Form . The distribution of cross-cultural sensitivity scores, measured by the Intercultural Insight Questionnaire (ICIQ), is categorized into three levels: (i) low, (ii) medium, and (iii) high. Thd findings of the analysis of cross-cultural experience items in the Student Questionnaire Form are described in the following six sections --Section I to VI..

I. English Newspapers and TV Programs

How often are student-teachers involved in reading English language newspapers and viewing English language television programs? The answers we obtained in Part I of Table 2 are somewhat striking. Over half of the respondents (57%) did not like to read any English language newspapers. Less than one-tenth (8%) read on a weekly basis, one-third (32%) did so monthly. Only a small number of students (3%) would actually read English language newspapers twice a week.

As for television viewing, the majority of students (82 %) did spend between one and seven hours a week watching some English language television programs. Over one-third (39 %) reported devoting 3 to 7 hours and two-fifths (44 %) less than 3 hours weekly to viewing some English language programs on the television. On a daily basis,

there is less than one-tenth who preferred to view English language programs for more than one hours. Altogether, about one-tenth of the students did not like to watch English language programs on TV.

II. Choice of English Dialects, Movies, and Acquaintance

In this part of the survey, respondents were asked to indicate their preference for English and American dialects, movies, and attitudes towards people from these countries. On the whole, we found ambivalence regarding students language choice and their acquaintance with British and American people. It revealed the majority of respondents preferred to learn standard British English, but with regard to movies and acquaintance, they would rather see American movies and make friends with Americans. As to the reason why most of the students (65%) were in favor of traditional British English over the American English dialect (31%), it was found that the traditional Oxford English language had been accepted by almost all of the students as the most standard, official, and orthodox English language. According to Part IV of Table 2, only a limited number of students indicated their interest or affinity to learn other(non-standard) English dialects such as the Canadian or Australian variety. With regard to choice of movies, there were five times more respondents who reported that they enjoyed seeing American movies rather than British productions. According to their responses, American movies are more exciting, creative, dynamic, and oriented toward the future as well as the younger generation. In addition, those who indicated more willingness to make friends with American people attributed this to their perception of

American people being less conservative, restrained and cautious with others, but more open, active, and friendly as compared to their British counterparts.

III. Visit to the United Kingdom and United States

Despite the fact that many students have the experience of traveling in Mainland China and some countries in the Far East, Part III of Table 2 shows only a limited number (7%) had the chance to visit the United Kingdom or the United States of America. Indeed, less than 1% of the respondents had visited the United Kingdom twice. The same is true for the United States. In general, most of the students learned about these countries though books, people, radio, and the television.

I V. Foreign Language

How much have students been exposed to other foreign languages besides English? The present study shows that two-third of the respondents had taken some foreign language courses (including Mandarin or Portuguese as elective) either on campus or in some other language institutes for at least a one-month period. Of these, only 6% preferred Oriental languages such as Mandarin and Japanese, 35 % studied European languages such as Portuguese as a compulsory course, the remaining 22% has chosen both Oriental and European languages.

V. Type of High School Attended

There are three main types of schools in Macau classified according to their policy on language of instruction, that is, (i) Portuguese-medium, (i) Chinese-medium, and (iii)

English-medium. 'Portuguese-medium school' refers to the type of language a school prefers to use-- i.e., mainly Portuguese for purpose of instruction in all public schools. It is a school with an environment or climate conducive to Portuguese culture. The great majority (46 %) of students in this study graduated from high schools in which both Chinese & English were used as the media of instruction. About fourth-tenth (43%) came from senior high schools in which only Chinese was adopted as the medium for instruction across the curriculum with exception of English lesson. The remaining one-tenth (12 %) completed their high school diploma in schools in which mainly English was employed as medium of instruction. Similar trends were noted for the above students during the time when they were studying in junior high schools.

Despite the fact that so many students came from high schools in which English and Chinese were both used as the instructional media, there was a serious lack of native English speakers in teaching English subjects at all levels of secondary schools in Macau. On the whole, the present study shows that in junior high schools only three percent of the respondents were taught by native English speakers in subjects taught through the English medium. The ratio of native English-speaking instructors to Chinese-speaking instructors of English was slightly higher in senior forms. The percentage of native English speakers increased three-fold (i.e. approximately ten percent) in senior forms and many came from the United Kingdom (5%), United States of America (5%), and other limited English-speaking countries such as Portugal and the Philippines (22 %).

VI. Overseas Study and Cross-Cultural Sensitivity

Traditionally, studying in universities abroad has been an important dream for a great number of college bound students in Macau. This study revealed approximately half (50 %) of the respondents in this survey expressed an interest in further study in Europe and America. In fact, nearly one-quarter preferred to go to British Commonwealth countries such as the United Kingdom (12%), Canada (21%), and Australia (19 %). Approximately, one-fourth (25%) were in favor of the United States. Less than one-tenth (7%) preferred other countries such as Taiwan, mainland China, Portuguese, France, and Germany. Only a few students answered "undecided" with respect to the country in which they wished to advance their education. About one-tenth would rather seek admission in one of the two major local post-secondary institutions in Macau.

On the whole, the distribution of cross-cultural sensitivity scores among student-teachers is approaching the normal distribution, with the mean of 14.08 and standard deviation of 2.76.

Statistical Relationships Between the Selected Variables

VII. Educational Aspiration by Field of Study

What levels of degree accomplishment are most desirable to student-teachers with respect to their fields of study? By and large, this study found that student-teachers had considerable aspirations towards high level educational attainment. That is, almost all respondents expressed their needs to continue with some advanced training after completion of initial teacher education at the University of Macau. Table 3 presents data showing students' educational aspirations with respect to the six academic fields of study. First, very few students (6 %) were indeed satisfied with the certificate

qualification. Of those who wished to obtain such a qualification, nearly half were registered in (non-credit) summer courses. Second, in order of proportion, those who had expectation of the bachelor's degree were represented by students majoring in Education (37 %), Chinese (32 %), Social Studies (2 %), other (8 %), English (15 %), and Mathematics & Science (7 %). Third, the single largest group (38 %)of master's degree seekers was composed of students who declared Chinese as their major field of study. Fourth, in contrast to the lower 8 % for the Mathematics & Science group, students in Social Studies constituted the greatest proportion (35 %) in terms of their intention to pursue a doctoral degree.

Chi-Square and ANOVA

In order to examine the relationship between academic major and educational aspiration, the Chi-Square procedures was employed. Results of the analysis in Table 4.1 reveal that the Cramer's V statistic of 0.236 (d f = 15) was too small to be significant at the 0.05 level. Thus, the hypothesis that students in certain academic major fields of study exhibit a markedly higher level of educational aspiration is not confirmed.

In addition, an analysis of variance (ANOVA) was applied to ascertain the difference between group means on educational aspirations for each of the academic majors. Table 5.1 shows the means and standard deviations of educational aspiration measures for each group. It should be noted that while students majoring in Chinese exceeded all other groups in educational aspiration, the lowest degree expectation was found in the field of Arts & Physical Education. According to the results of the ANOVA, the computed F ratio of 1.1869 (df = 5,127) was too small to be significant at the 0.05 level. Thus, the

follow-up post hoc multiple comparison with the Tukey-B procedure was not employed. We may conclude that there is no fundamental difference in educational aspirations for students in various academic fields of study.

VIII. Cross-Cultural Sensitivity by Field of Study

Table 6 is a cross-tabulation of cross-cultural sensitivity by academic field. The "average" group refers to those students -- i.e., the majority (approximately 68 %)-- whose ICIQ scores are between 11 and 17. The overall distribution of ICIQ scores is rather close to a normal distribution, and the plus and minus of one standard deviations 2.76 were used as the cutoff points for different levels of cross-cultural sensitivity. Students with ICIQ scores which were one standard deviation below the mean of 14.08 were considered to have a "lower" level of cross-cultural sensitivity, whereas those with ICIQ scores above one standard deviation were in the "higher" designation. According to the figures in Table 6, students with lower cross-cultural sensitivity scores tended to major in Chinese (69%), while greater cross-cultural sensitivity were typically represented by fewer students such as those in the fields of Education (27 %) and Chinese (27%).

Chi-Square and ANOVA

The Chi-square procedure was used to examine the relationship between major field of study and cross-cultural sensitivity as measured by the ICIQ score. Results of the analysis in Table 4.2 indicated that the Cramer's V statistic of 0.214 (df =10) was not

significant at the 0.05 level. Thus, we may conclude that a student's field of study is independent of his or her level of sensitivity towards the other culture.

In order to find out whether differences exist between fields of study on cross-cultural sensitivity (ICIQ), an analysis of variance (ANOVA) was employed. Results of the analysis in Table 5.2 revealed that the F ratio of 2.05 (df = 5,167) was too small to be significant at the 0.05 level. The hypothesis that students in certain academic fields of study are likely to exhibit a markedly higher level of cross-cultural sensitivity was not supported. Thus, we may conclude that there is no fundamental difference between students across different fields of study in terms of their degree of sensitivity and familiarity with the American culture.

IX. Educational Aspiration by Sex

A cross-tabulation of educational aspiration by sex is shown in Table 7. It should be noted that over 80% of the students in the sample are females and overall only few wished to complete just the certificate qualification (5.5%). In general, both the male (41 %) and female (51 %) students preferred to obtain a bachelor's degree. It can be seen that although more men (32 %) than women (22%) intended to obtain a master's degree, a slightly higher proportion of women (20%) rather than men (18 %) were aspired toward furthering their post-graduate education by completing a PhD degree. Thus, the crisis that gradual diminishing or low weeding out of women in postgraduate studies in education may eventually lead to a narrowing pipeline for women in the

academic field on teacher education or educational research and policy may not actually exist in Macau (Koo, 1994).

Chi-square and ANOVA

For the second research question, the relationship between degree expectation and sex was ascertained by the Chi-square procedure. Results of the analysis as shown in Table 4.3 demonstrated that the Cramer's V statistic of 0.094 (df = 3) was not significant at the 0.05 level. In view of these findings, it is thus concluded that sex has no marked relationship with educational aspiration.

An analysis of variance (ANOVA) was employed to ascertain the difference between males and females on educational aspirations. Table 5.3 shows the means and standard deviations for the male and female groups in respect to degree expectation. Although, males seemed to demonstrate slightly higher aspiration than females towards degree aspiration, results of the ANOVA indicated that the F ratio of 0.012 was too small to be significant at the 0.05 level. We may thus conclude that there is no difference in educational aspiration between the male and female students.

X. Cross-Cultural Sensitivity by Sex

A cross-tabulation of cross-cultural sensitivity scores by sex is shown in Table 8. On the whole, males were more typical than females to receive the average ICIQ score. Also, females seemed to be more diversified toward sensitivity of other culture since a greater portion of females (11 %) rather than males (7%) were found in the "above average"

category. Only 4 percent of males scored below average on ICIQ compared to 12 percent for females.

Chi-square and ANOVA

The third research question on the relationship between sex and cross-cultural sensitivity was determined by the Chi-square procedure. Results of the analysis as shown in Table 4.4 revealed that the Cramer's V statistic of 0.106 (df = 2) was too small to reach statistical significance at the 0.05 level. On the basis of this finding, we may conclude that student gender has no bearing on their level of sensitivity towards other culture.

An analysis of variance (ANOVA) was used to test for the difference between the two sexes on the level of cross-cultural sensitivity as measured by the ICIQ. Table 5.4 summarizes the means and standard deviations of the ICIQ scores for male and female students. Results of the ANOVA indicated that although the mean score of the male group was 0.42 points lower than that of the female group, the F ratio of 1.332 did not attain significance at the 0.05 level. Hence, we may conclude that there is no marked difference between male and female students in terms of their level of sensitivity toward other cultures.

XI. Influence of Cross-Cultural Sensitivity on Field of Study by Educational Aspiration

This part of the analysis is concerned with the relationship between field of study and educational aspiration when cross-cultural sensitivity (ICIQ) is used as the control

variable. As shown earlier, neither the relationship between field of study and educational aspiration nor differences in educational aspirations among students in various fields of study were found to be significant. Further results derived from the multivariate analysis with cross-tabulation to examine the influence of fields of study on educational aspiration, when each level of cross-cultural sensitivity is controlled (1 = low, 2 = average, 3 = high), confirmed that none of the chi-square values across all the three levels of the control variable (ICIQ) were significant at the 0.05 level. On the basis of these findings, it is evident that field of study has no bearing on educational aspiration for student-teachers at various level of cross-cultural sensitivity.

XII. Correlation and Multiple Regression

In this section, a set of three predictor variables including age of student (AGE), educational aspiration (DEGEXP), and English examination score (CERTENG) based on final school year (Form 6) results were used to correlate with the criterion variable of cross-cultural sensitivity (ICIQ) score. Table 9 is a summary of the intercorrelations between the four selected measures. It is interesting to note that none of the correlations here were found to be significant at the 0.05 level, the largest correlation obtained is between AGE and ICIQ. That is, chronological age (AGE) is associated positively with ICIQ ($r = 0.0599$), but negatively with CERTENG ($r = -0.0821$), meaning older students tended to be more sensitive toward the American culture but their high school English language achievement was lower than that of their younger counterparts. Nonetheless, both correlation coefficients are not significant at the 0.05 level.

Using the techniques of stepwise multiple regression, this study revealed that out of the set of three selected predictor variables-- i.e., CERTENG, DEGEXP, AGE -- none was able to be accepted as fulfilling the necessary conditions to enter in the regression equation at the 0.05 level. In essence, the present study failed to find a prediction equation in forecasting students' cross-cultural sensitivity .

Discussion

The findings of the present study demonstrate that many student-teachers in Macau did not have sufficient preparation in English before their enrollment in teacher education. The lack of qualified teachers in high school English language subjects coupled with ineffective teaching methods and limited opportunities to engage in cross-cultural communication could be responsible, in part, for the linguistic retardation of secondary school students in Macau.

The common belief that Macau students had very strong expectancies for future academic success is supported. The overwhelming majority (94%) of student-teachers were not satisfied with a sub-degree teaching certificate qualification, with nearly half intending to continue for a bachelor's degree.

On the other hand, the present study also lends further clarification to the relationship between educational aspiration, field of study and cross-cultural sensitivity. On the whole, there is a lack of significant relationship between educational aspiration, field of study and sex. The relationship between cross-cultural sensitivity and sex is not significant at the 0.05 level. While significant relationship did not exist between cross-cultural sensitivity and field of study, the result was consistent with the earlier findings of

Koo(1986) for a large sample of Chinese college students in California. The lack of agreement may be, in part, due to the nature of different classifications of degree major as well as those Macau subjects in the present study were from somewhat lower socio-economic backgrounds and cultural setting and therefore had different academic orientations.

As to the intercorrelations between cross-cultural sensitivity, English examination scores, educational expectation, and age, the present study demonstrated that none of the computed coefficients were significant at the 0.05 level. Degree of cross-cultural sensitivity (ICIQ) was positively but not and related to age and individual's achievement in English and educational aspiration. Thus, it appears that, to some degree cross-cultural sensitivity depends on maturity, intercultural perception, and interpersonal experience with people from other cultures. Moreover, the possibility that the reason for the markedly negative correlation between age and English language competence (CERTENG) is that older students could have encountered more difficulties in English much earlier in their middle school years, or it may due to grade inflation or the gradual lowering of the overall English standards in the final year of the secondary school leaving examination in recent years. In addition, none of the selected predictor variables was valid in forecasting the degree of cross-cultural sensitivity.

Educational aspiration is not related to any of the selected variables (i.e., ICIQ, CERTENG, and AGE), despite the fact that the vast majority of Macau students has high academic expectations for themselves. While a full explanation may not be possible in the present investigation, it is understood that aspiration is a highly complex social,

cultural and psychological process in which beginning Chinese student-teachers in Macau are not totally self-aware or capable of inquiring and reflecting about themselves, and will continue to develop across time or emerge differentially through interpersonal communication, socio-cultural adaptation, and self-actualization. Moreover, aspiration may culminate with, personal growth, professional training and teaching experiences that last a lifetime for those who decide to choose teaching as their career.

The present study provides only a glimpse of the vast complexity in the relationships between field of study, educational aspiration, and cross-cultural sensitivity as well as some of the cross-cultural communication patterns of Chinese student-teachers at the University of Macau. Exploration of the predictive validity of other important variables such as motivation, socio-economic status, college academic achievement, as well as linguistic and cognitive measures were not included in this study. There is a strong need for future research on teacher education to refine our current understanding of the process of cross-cultural communication and educational aspiration of Chinese student-teachers. Moreover, a follow-up research should be undertaken to ascertain changes in student-teachers' educational aspiration and cross-cultural communication patterns after the first year of their teaching career. A longitudinal study is also recommended over a cross-sectional design, with possible inclusion of Hong Kong and other immigrant groups from the Chinese mainland, particularly those newcomers from Kwantung delta (e.g., Zhuhai, Zhongshan, Kwongchow, etc.) and Beijing and Shanghai municipals who wish to choose teaching as a career.

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Table 1

Background Characteristics of Macau Respondents (N =196)

		Frequency	Percent
I.	Sex		
	Male	28	14.3
	Female	168	85.7
II.	Place of Birth		
	Hong Kong	13	6.6
	Mainland China	52	26.5
	Taiwan	1	0.5
	Macau	126	64.3
	Other	4	2.0
III.	Age (years)		
	15-19 years	49	25.9
	20-24	110	58.1
	25-29	14	7.4
	30-34	4	2.1
	35-39	3	1.6
	40 above	9	4.8
IV.	Program		
	BEd1	70	35.7
	BEd2	18	9.2
	BEd3	2	1.0
	ECE-P1	21	10.7
	ECE-P2	6	3.1
	UM-PGDE-Ins	5	2.6
	SE-Ins1	33	16.8
	SE-P2	18	9.2
	UMS-Ins	23	11.7
V.	Major Field of Study		
	Chinese	53	31.0
	English	27	15.8
	Math & Science	11	6.4
	Social Science	4	2.3
	Arts & PE	--	--
	Others	21	12.3
	Education	55	32.2
VI.	English Exam		
	A	9	6.8
	B	50	37.6
	C	53	39.8
	D	15	11.3
	E	6	4.6
VII.	Educational Aspiration		
	Certificate	9	4.6
	Bachelor	74	37.8
	Master	37	18.9
	Doctorate	29	14.8
	Undecided	47	24.0

Table 2

Summary of Responses on Questionnaire Items of Macau (N=196) Students

	Variable	Frequency	Percent
I.	**Newspapers and TV**		
	Read English Newspapers		
	Twice / week	5	2.6
	Once / week	17	8.7
	Once / month	63	32.1
	None	111	56.6
	Watch English TV Channels		
	At least 1 hr./day	12	6.2
	3 to 7 hrs./week	75	38.9
	Below 3 hrs. / week	84	43.5
	None	22	11.4
II.	**Choice of Movies and Friends**		
	Between English and American Movies, I prefer to see		
	English	25	12.8
	American	142	72.4
	Both	6	3.1
	Don't know	23	11.8
	Between British and Americans, I like to make friends with people from		
	U.K.	42	21.4
	U.S.	112	57.1
	Both	9	4.6
	Don't know	33	16.8
III.	**Travel Experience**		
	Number of Visits to the U.K.		
	Never	182	92.9
	One	13	6.6
	Two	1	0.5
	Three	--	--
	Number of Visits to the U.S.		
	Never	178	90.8
	One	15	7.7
	Two	3	1.5
	Three	--	--
IV.	**Language Choice**		
	The Type of English Language I Prefer to Learn		
	British English	124	65.3
	American English	59	31.1
	Both	5	2.6
	Other English Dialects	2	1.1
	Other Languages Learned Besides English		
	Yes	124	63.3
	No	72	36.7

Foreign Language Course Taken.

Oriental	12	6.1
European	68	34.7
Oriental & European	44	22.4
None	72	36.7

V. **High School Background**

Type of Junior High School Attended

Chinese	82	42.5
English	23	11.9
Chinese & English	88	45.6

Type of Senior High School Attended

Chinese	80	41.5
English	26	13.5
Chinese & English	87	45.0

Nationality of English Instructor in Final Junior High School Year

British	4	2
American	5	2.6
Chinese	167	85.2
Other	20	10.2

Nationality of English Instructor in My Final Senior High School Year

British	10	5.1
American	9	4.6
Chinese	134	68.4
Other	43	21.9

VI. **Overseas Study and Cross-Cultural Sensitivity**

1. Intercultural Insight (ICIQ) Score ($\bar{X}$=14.875, SD =2.759)

High	20	10.4
Medium	152	78.8
Low	21	10.9

2. Preferred Foreign Country of Study

U.K.	24	12.2
U.S.	48	24.5
Canada	42	21.4
Australia	37	18.9
Other	13	6.6
Don't Go Aboard	26	13.3
Undecided	6	3.1

Table 3

Cross-Tabulation of Educational Aspiration by Field of Study Field of Study for Macau Students (N=196)

	Chinese	English	Math & Science	Social Studies	Other	Education	Row Total
Certificate	--	--	--	--	4	3	7
	--	--	--	--	(57.1)	(42.9)	(5.5)
Bachelor	19	9	4	1	5	22	60
	(31.7)	(15.0)	(6.7)	(1.7)	(8.3)	(36.7)	(46.9)
Master	12		1	1	7	8	32
	(37.5)	(9.4)	(3.1)	(3.1)	(21.9)	(25.0)	(25.0)
Doctoral	10	6	1	2	3	7	29
	(34.5)	(20.7)	(3.4)	(6.9)	(10.3)	(24.1)	(22.7)
Column Total	41	18	6	4	19	40	128
	(32.0)	(14.1)	(4.7)	(3.1)	(14.8)	(31.3)	(100)

( ) indicates row percentage

Table 4

Summary Table for Chi-Square Analysis between Selected Pairs of Variables for Macau Students (N=196)

Cramer's V	DF	Contingency Coef.	Significant Level	Min. E. F.
1. Educational Aspiration by Field of Study				
0.23613	15	0.37855	0.12422	0.219
2. Cross-Cultural Sensitivity (ICIQ) by Field of Study				
0.21394	10	0.28959	0.11885	0.357
3. Educational Aspiration by Sex				
0.09430	3	0.09389	0.722318	1.329
4. Cross-Cultural Sensitivity (ICIQ) by Sex				
0.10579	2	0.10520	0.33961	2.798

* $P < 0.05$

Table 5

ANOVA Summary Table for Selected Pairs of Variables for Macau Students (N=196)

1. **Educational Aspiration by Field of Study**

Source	D.F.	S.S.	M.S.	F. Ratio	F. Prob
Between Groups	5	4.69	0.9387	1.1869	0.3195
Within Groups	122	96.49	0.7909		
Total	127	101.18			

2. **Cross-Cultural Sensitivity (ICIQ) by Field of Study**

Source	D.F.	S.S.	M.S.	F. Ratio	F. Prob
Between Groups	5	75.46	15.0925	2.0490	0.0745
Within Groups	162	1193.24	7.3657		
Total	167	1286.71			

3. **Educational Aspiration by Sex**

	N	Mean	S.D.	F	F. Prob
Male	22	2.5909	0.908	0.012	0.911
Female	127	2.5748	0.868		

4. **Cross-Cultural Sensitivity (ICIQ) by Sex**

	N	Mean	S.D.	F	F. Prob
Male	27	13.9259		1.332	0.250
Female	166	14.3494			

Table 6

Cross-Tabulation of Cross-Cultural Sensitivity (ICIQ) Score by Field of Study for Macau Students (N=196)

	Chinese	English	Math &Science	Social Studies	Other	Education	Row Total
Low	11	1	--	--	2	2	16
	(68.8)	(6.3)	--	--	(12.5)	(12.5)	(9.5)
Average	38	21	9	3	18	48	137
	(27.7)	(15.3)	(6.6)	(2.2)	(13.1)	(35.0)	(81.5)
High	4	3	2	1	1	4	15
	(26.7)	(20.0)	(13.3)	(6.7)	(6.7)	(26.7)	(8.9)
Column Total	53	25	11	4	21	54	168
	(31.5)	(14.9)	(6.5)	(2.4)	(12.5)	(32.1)	(100)

( ) indicates row percentage

Table 7

Cross-Tabulation of Educational Aspiration by Sex for Macau Students (N=196)

	Male	Female	Row Total
Certificate	2	7	9
	(9.1)	(5.5)	(6.0)
Bachelor	9	65	74
	(40.9)	(51.2)	(49.7)
Master	7	30	37
	(31.8)	(23.6)	(24.8)
Doctoral	4	25	29
	(18.2)	(19.7)	(19.5)
Column Total	22	127	149
	(14.8)	(85.2)	(100)

( ) indicates **Column** Percentage

Table 8

Cross-Tabulation of Cross-Cultural Sensitivity by Sex for Macau Students (N=196)

	Male	Female	Row Total
High	2 (7.4)	18 (10.8)	20 (10.4)
Average	24 (88.9)	128 (77.1)	152 (78.8)
Low	1 (3.7)	20 (12.0)	21 (10.9)
Column Total	27 (14.0)	166 (86.0)	193 (100)

( ) indicates **Column** Percentage

Table 9

Intercorrelations of Selected Variables for Macau Students (N = 196)

	ICIQ	CERTENG	DEGEXP	AGE
ICIQ	1.0000			
CERTENG	0.0129	1.0000		
DEGEXP	-0.0193	0.1429	1.0000	
AGE	0.599	-0.0821	-0.0089	1.0000

* $p < 0.05$

Table 10

Stepwise Multiple Regression Analysis on Cross-Cultural Sensitivity (ICIQ) for Macau Students (N=196)

Block Number 1. Dependent Variable. ICIQ Cross-Cultural Sensitivity

Method: Stepwise Criteria PIN .0500 POUT .1000

Variable	Mean	Std Dev
ICIQ	14.075	2.759
CERTENG	3.344	0.891
DEGEXP	2.624	0.846
AGE	21. 871	4.668

1. ICIQ Cross-Cultural Sensitivity Score
2. CERTENG HKCEE English Exam Grade.
3. DEGEXP Educational Aspiration
4. AGE Chronological Age in Years.